Index

IEE Proceedings Optoelectronics

Vol. 149, 2002

Author Index

A

Abdalla, M. p65
Abstreiter, G. p201
Afrailov, M.A. p41
Ahland, A. p122
Aimez, V. p138
Alibert, C. p22
Almuneau, G. p88
Amann, M.-C. p201
Andreev, I.A. p41
Andreychuk, O.V. p41
Arscott, S. p82
Astakhova, A.P. p27
Ayala, A. p222

B

Bach, R. p1
Baets, R. p161
Balkan, N. p197
Banerjee, S. p70
Barlow, G.F. p70
Beauvais, J. p138
Beerens, J. p138
Bertulis, K. p111
Bienstman, P. p161
Bjarklev, A. p206
Bock, H. p1
Bocquet, R. p82
Bohm, G. p201
Boland-Thoms, A. p197
Bournazaud, F. p22
Broeng, J. p206

C

Cerutti, L. p22
Charters, R.B. p51
Chen, L. p211
Chuang, S.L. p174
Chusseau, L. p88
Civis, S. p27
Coldren, L.A. p88
Coutaz, J.-L. p111

D

Dai, X. p211
Demirer, R.M. p197
Desplanque, L. p82
Ding, H. p211
Djie, H.S. p138
Dokhane, N. p7
Dowd, P. p138

E

El-Mikati, H.A. p75
Erbert, G. p152
Evans, J.P.O. p45

F

Fichtner, W. p166
Fischler, W. p1

G

Gaillard, S. p22
Garnache, A. p22
Gasquet, D. p88
Genty, F. p22
Gonzalez, O. p222
Grattan, K.T.V. p75
Grech, P. p22
Grupp, W. p1
Gunawan, O. p138

H

Hadji, E. p22
Hansen, T.P. p206
Hashimshony, D. p93
Hasler, K.-H. p152
Herrmann, M. p116
Hess, K. p182
Hon, H.W. p45
Hong, J.-W. p193
Hovenier, J.N. p99
Huntington, A. p88

I

Imenkov, A.N. p27

J

Jensen, J.R. p206

K

Kaminska, M. p111
Karandashev, S.A. p33
Kizhayev, S.S. p36
Klaassen, T.O. p99
Klappenberger, F. p99
Klehr, A. p152
Klein, B. p182
Knippels, G.M.H. p99
Knudsen, E. p206
Kolchanova, N.M. p27
Kono, S. p105
Korona, K. p111
Kratschmer, M. p99
Krotkus, A. p111
Kubat, P. p27

L

Lampin, J.F. p82
Libori, S.E.B. p206
Lin, C.-S. p193
Lippens, D. p82
Lippi, G.L. p7
Liu, Y. p182
Love, J.D. p51
Lu, P. p211

M

Marcinkevicius, S. p111
Masselin, P. p82
Matveev, B.A. p33
Mihailov, S.J. p211
Mikhailova, M.P. p41
Militello, C. p222
Moiseev, K.D. p41
Molchanov, S.S. p36
Mollot, F. p82
Mouret, G. p82

N

Naganuma, M. p217
Nakamura, S. p145
Ng, S.L. p138
Ng, W.-C. p182

O

Obayya, S.S.A. p75
Oelmann, B. p65
Oku, S. p217
O'Nils, M. p65
Oyafuso, F. p182

P

Pai, F.-J. p193
Papadopoulos, K. p93
Peytavit, E. p82
Picard, E. p22
Piprek, J. p145
Prez-Jimenez, R. p222

R

Rahman, B.M.A. p75
Rememnyi, M.A. p33
Richter, A. p1
Rodriguez, S. p222
Romanini, D. p22
Rosewell, N.A. p189
Rosskopf, J. p201

S

Sakai, K. p105, p116
Scarpa, G. p201
Schomburg, E. p99
Schulz, D. p122
Seurin, J.-F.P. p174
Shibata, Y. p217
Shore, K.A. p70
Siegert, J. p111
Sigl, A. p201
Simonsen, H.R. p206
Smelser, C. p211
Sorensen, T. p206
Stoyanov, N.D. p41
Streiff, M. p166
Stus, N.M. p33
Sun, J. p59

T

Talalakin, G.N. p33
Tani, M. p105, p116
Tomljenovic-Hanic, S. p51
Travis, A.R.L. p189

U

Ulbrich, N. p201

V

van der Meer, A.F.G. p99
van Es, R.W. p99
Vanbesien, O. p82
Voges, E. p122

W

Wah, J.-Y. p197
Walker, R.B. p211
Walters, A. p27
Watanabe, M. p116
Wenckebach, W.T. p99
Wenzel, H. p152
Wiedenhaus, M. p122
Williams, K.J. p131
Winnerl, S. p99
Witzig, A. p166
Wolos, A. p111

Y

Yakovlev, Y.P. p27, p36, p41
Yamamoto, M. p217
Yang, G.Q. p17
Yang, X.Y. p17
Yeh, R.-H. p193
Yenidunva, R. p197

Z

Zigler, A. p93
Zotova, N.V. p33, p36

BIOMEDICAL ENGINEERING

Robust window discriminator for photon-counting pixel detectors p65

CMOS INTEGRATED CIRCUITS

Robust window discriminator for photon-counting pixel detectors p65

COMMUNICATION SYSTEM THEORY

Influence of crosstalk on the scalability of WDM cross-connect networks p59
UV-induced polarisation-dependent loss (PDL) in tilted fibre Bragg gratings: application of a PDL equaliser p211

DISPLAY TECHNOLOGY

Flat panel virtual display p189

ELECTRO-OPTICAL DEVICES

Modelling and simulation of electroabsorption modulators p122

FIBRE OPTICS

Generation of a compressed pulse pair based on cross-phase modulation in single-mode fibres p17
Spectral macro-bending loss considerations for photonic crystal fibres p206
UV-induced polarisation-dependent loss (PDL) in tilted fibre Bragg gratings: application of a PDL equaliser p211

IMAGE SENSORS

Multiple-view line-scan imaging p45
Robust window discriminator for photon-counting pixel detectors p65

INFORMATION THEORY

Error estimation of the impulse response on diffuse wireless infrared indoor channels using a Monte Carlo ray-tracing algorithm p222

INSTRUMENTATION AND MEASUREMENT

Multiple-view line-scan imaging p45
Robust window discriminator for photon-counting pixel detectors p65
Terahertz electromagnetic generation via optical frequency difference p82

INTEGRATED OPTICS

Analysis of polarisation rotation in cascaded optical waveguide bends p75
Analysis of strain-induced polarisation-insensitive integrated waveguides fabricated using ion-implantation-induced intermixing p138
Cut-off wavelength and transient effects in asymmetrically clad single-mode buried-channel waveguides p51
Reflection characteristics and cascadability of a multi-mode interference 3dB coupler p217
Spectral macro-bending loss considerations for photonic crystal fibres p206

LASER BEAM MODULATION

Coherent detection of mid-infrared radiation up to 60 THz with an LT-GaAs photoconductive antenna p105
Coupled-cavity vertical-emitting semiconductor laser for continuous-wave terahertz emission p88
Improved direct modulation technique for faster switching of diode lasers p7
Sequential detection technique to measure the shape of short THz pulses in the presence of a large jitter in the trigger signal p99
Simulating the modulation response of VCSELs: the effects of diffusion capacitance and spatial hole-burning p182
Simulation of the generation of high-power pulses in the GHz range with three-section DBR lasers p152
Single mode laser based on InAsSb/InAsSbP double heterostructure with tuning from 3.224 to 3.234 μm p27
Terahertz electromagnetic generation via optical frequency difference p82
Terahertz imaging of objects in powders p116
Tunable, bandwidth controllable source of THz radiation p93

LASER BEAMS

Tunable, bandwidth controllable source of THz radiation p93

LASER DESIGN

Discussions on suitable modulation schemes for a bi-directional hot electron light emitter and absorber p197
High-performance 5.5 μm quantum cascade lasers with high-reflection coating p201
Physics of high-power InGaN/GaN lasers p145
Simulation of the generation of high-power pulses in the GHz range with three-section DBR lasers p152

LASER RESONATORS AND CAVITIES

Computing simulation optical modes for VCSEL device p166
Coupled-cavity vertical-emitting semiconductor laser for continuous-wave terahertz emission p88
Discussions on suitable modulation schemes for a bi-directional hot electron light emitter and absorber p197
Efficient optical modelling of VCSELs using a vector mode-matching method p174
Rigorous and efficient optical VCSEL model based on vectorial eigenmode expansion and perfectly matched layers p161
Simulating the modulation response of VCSELs: the effects of diffusion capacitance and spatial hole-burning p182
Single mode laser based on InAsSb/InAsSbP double heterostructure with tuning from 3.224 to 3.234 μm p27
Type-I quantum-well VCSEL structure on GaSb emitting in the 2-2.5 μm range p22

LASERS

Sequential detection technique to measure the shape of short THz pulses in the presence of a large jitter in the trigger signal p99

MEASUREMENT OF SPECIFIC VARIABLES

Reflection characteristics and cascadability of a multi-mode interference 3dB coupler p217
Sequential detection technique to measure the shape of short THz pulses in the presence of a large jitter in the trigger signal p99

MICROWAVE MEASUREMENT TECHNIQUES

Coherent detection of mid-infrared radiation up to 60 THz with an LT-GaAs photoconductive antenna p105
Sequential detection technique to measure the shape of short THz pulses in the presence of a large jitter in the trigger signal p99
Terahertz imaging of objects in powders p116

MODULATORS AND DEMODULATORS

Robust window discriminator for photon-counting pixel detectors p65

NONLINEAR OPTICS

Generation of a compressed pulse pair based on cross-phase modulation in single-mode fibres p17
Simulating the modulation response of VCSELs: the effects of diffusion capacitance and spatial hole-burning p182

NUMERICAL ANALYSIS

Analysis of polarisation rotation in cascaded optical waveguide bends p75
Computing simulation optical modes for VCSEL device p166

OPTICAL BEAM MODULATORS

Modelling and simulation of electroabsorption modulators p122

OPTICAL COMMUNICATION

Error estimation of the impulse response on diffuse wireless infrared indoor channels using a Monte Carlo ray-tracing algorithm p222
Influence of crosstalk on the scalability of WDM cross-connect networks p59
Optical performance monitoring in transparent and configurable DWDM networks p1

OPTICAL COMMUNICATION EQUIPMENT

Analysis of strain-induced polarisation-insensitive integrated waveguides fabricated using ion-implantation-induced intermixing p138
Efficient optical modelling of VCSELs using a vector mode-matching method p174
UV-induced polarisation-dependent loss (PDL) in tilted fibre Bragg gratings: application of a PDL equaliser p211

OPTICAL DEVICES

Flat panel virtual display p189
High-performance 5.5 μm quantum cascade lasers with high-reflection coating p201
Optoelectronic characteristics of MEH-PPV polymer LEDs with n-a-SiCGe:H and p-a-Si:H carrier injection layers p193
UV-induced polarisation-dependent loss (PDL) in tilted fibre Bragg gratings: application of a PDL equaliser p211

OPTICAL IMAGE PROCESSING

Multiple-view line-scan imaging p45

OPTICAL MATERIALS

Coherent detection of mid-infrared radiation up to 60 THz with an LT-GaAs photoconductive antenna p105
Comparisons between dual-depletion-region and uni-travelling-carrier p-i-n photodetectors p131
High-performance 5.5 μm quantum cascade lasers with high-reflection coating p201
Optoelectronic characteristics of MEH-PPV polymer LEDs with n-a-SiCGe:H and p-a-Si:H carrier injection layers p193
Spectral macro-bending loss considerations for photonic crystal fibres p206
Tunable, bandwidth controllable source of THz radiation p93

OPTICAL SWITCHING

Be-doped low-temperature-grown GaAs material for optoelectronic switches p111
Influence of crosstalk on the scalability of WDM cross-connect networks p59
Optical performance monitoring in transparent and configurable DWDM networks p1

OPTICAL TECHNIQUES

Analysis of strain-induced polarisation-insensitive integrated waveguides fabricated using ion-implantation-induced intermixing p138
Coherent detection of mid-infrared radiation up to 60 THz with an LT-GaAs photoconductive antenna p105
Coupled-cavity vertical-emitting semiconductor laser for continuous-wave terahertz emission p88
Generation of a compressed pulse pair based on cross-phase modulation in single-mode fibres p17
Optoelectronic characteristics of MEH-PPV polymer LEDs with n-a-SiCGe:H and p-a-Si:H carrier injection layers p193
Reflection characteristics and cascadability of a multi-mode interference 3dB coupler p217
Sequential detection technique to measure the shape of short THz pulses in the presence of a large jitter in the trigger signal p99
Simulation of the generation of high-power pulses in the GHz range with three-section DBR lasers p152
Single mode laser based on InAsSb/InAsSbP double heterostructure with tuning from 3.224 to 3.234 μm p27
Terahertz electromagnetic generation via optical frequency difference p82
Terahertz imaging of objects in powders p116
Tunable, bandwidth controllable source of THz radiation p93

OPTICAL WAVEGUIDES

Analysis of polarisation rotation in cascaded optical waveguide bends p75
Analysis of strain-induced polarisation-insensitive integrated waveguides fabricated using ion-implantation-induced intermixing p138
Cut-off wavelength and transient effects in asymmetrically clad single-mode buried-channel waveguides p51
Efficient optical modelling of VCSELs using a vector mode-matching method p174
Flat panel virtual display p189
Reflection characteristics and cascadability of a multi-mode interference 3dB coupler p217

OPTIMISATION

Improved direct modulation technique for faster switching of diode lasers p7

OPTOELECTRONICS

Coherent detection of mid-infrared radiation up to 60 THz with an LT-GaAs photoconductive antenna p105
Comparisons between dual-depletion-region and uni-travelling-carrier p-i-n photodetectors p131
Flat panel virtual display p189
High-power mid-infrared light emitting diodes grown by MOVPE p36
Optoelectronic characteristics of MEH-PPV polymer LEDs with n-a-SiCGe:H and p-a-Si:H carrier injection layers p193
Towards longwave (5-6 μm) LED operation at 80°C: injection or extraction of carriers? p33
Type II GaSb based photodiodes operating in spectral range 1.5-4.8 μm at room temperature p41

PHOTODETECTORS

Multiple-view line-scan imaging p45
Robust window discriminator for photon-counting pixel detectors p65
Terahertz electromagnetic generation via optical frequency difference p82

PRODUCTION ENGINEERING

Physics of high-power InGaN/GaN lasers p145
Terahertz imaging of objects in powders p116

SEMICONDUCTOR DEVICE MODELLING

Comparisons between dual-depletion-region and uni-travelling-carrier p-i-n photodetectors p131
Computing simulation optical modes for VCSEL device p166
Coupled-cavity vertical-emitting semiconductor laser for continuous-wave terahertz emission p88
Efficient optical modelling of VCSELs using a vector mode-matching method p174
Modelling and simulation of electroabsorption modulators p122
Physics of high-power InGaN/GaN lasers p145
Rigorous and efficient optical VCSEL model based on vectorial eigenmode expansion and perfectly matched layers p161
Simulating the modulation response of VCSELs: the effects of diffusion capacitance and spatial hole-burning p182
Simulation of the generation of high-power pulses in the GHz range with three-section DBR lasers p152

SEMICONDUCTOR INTERFACES

Analysis of strain-induced polarisation-insensitive integrated waveguides fabricated using ion-implantation-induced intermixing p138
Discussions on suitable modulation schemes for a bi-directional hot electron light emitter and absorber p197
Modelling and simulation of electroabsorption modulators p122

SEMICONDUCTOR LASERS

Computing simulation optical modes for VCSEL device p166
Coupled-cavity vertical-emitting semiconductor laser for continuous-wave terahertz emission p88
Discussions on suitable modulation schemes for a bi-directional hot electron light emitter and absorber p197
Efficient optical modelling of VCSELs using a vector mode-matching method p174
Gain calculations for unipolar near infrared intersubband semiconductor laser p70
High-performance 5.5 μm quantum cascade lasers with high-reflection coating p201
Improved direct modulation technique for faster switching of diode lasers p7
Physics of high-power InGaN/GaN lasers p145
Rigorous and efficient optical VCSEL model based on vectorial eigenmode expansion and perfectly matched layers p161
Simulating the modulation response of VCSELs: the effects of diffusion capacitance and spatial hole-burning p182
Simulation of the generation of high-power pulses in the GHz range with three-section DBR lasers p152
Single mode laser based on InAsSb/InAsSbP double heterostructure with tuning from 3.224 to 3.234 μm p27
Type-I quantum-well VCSEL structure on GaSb emitting in the 2-2.5 μm range p22

SEMICONDUCTOR MATERIALS

Analysis of strain-induced polarisation-insensitive integrated waveguides fabricated using ion-implantation-induced intermixing p138
Discussions on suitable modulation schemes for a bi-directional hot electron light emitter and absorber p197

SEMICONDUCTOR TECHNOLOGY

Analysis of strain-induced polarisation-insensitive integrated waveguides fabricated using ion-implantation-induced intermixing p138
Be-doped low-temperature-grown GaAs material for optoelectronic switches p111
Rigorous and efficient optical VCSEL model based on vectorial eigenmode expansion and perfectly matched layers p161

SINGLE ANTENNAS

Coherent detection of mid-infrared radiation up to 60 THz with an LT-GaAs photoconductive antenna p105

STATISTICAL ANALYSIS

Error estimation of the impulse response on diffuse wireless infrared indoor channels using a Monte Carlo ray-tracing algorithm p222

SWITCHING THEORY

Influence of crosstalk on the scalability of WDM cross-connect networks p59
Optical performance monitoring in transparent and configurable DWDM networks p1

THIN FILM GROWTH

Be-doped low-temperature-grown GaAs material for optoelectronic switches p111
High-power mid-infrared light emitting diodes grown by MOVPE p36
Terahertz electromagnetic generation via optical frequency difference p82
Type II GaSb based photodiodes operating in spectral range 1.5-4.8 μm at room temperature p41

WAVEGUIDE THEORY

Cut-off wavelength and transient effects in asymmetrically clad single-mode buried-channel waveguides p51
Efficient optical modelling of VCSELs using a vector mode-matching method p174